

Weekly Report

2016.11.07-2016.11.13

1.This Week

Security Projects

1.wirte the using document of our system.

Seminar Courses

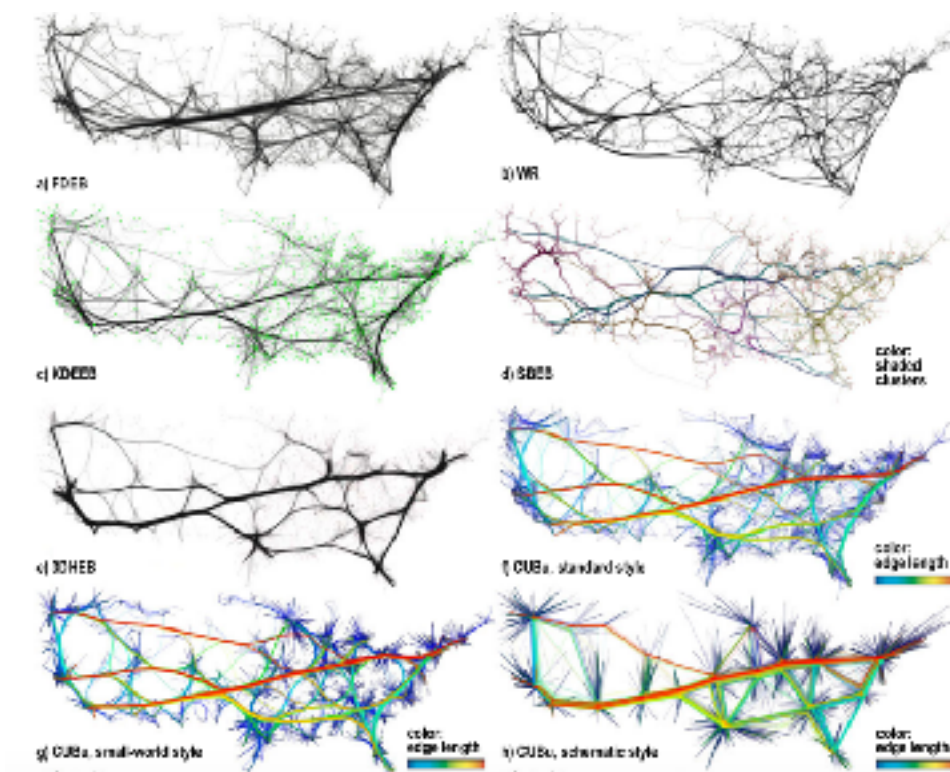
1.Prepare for exams.

Paper Report

1.Prepare for the paper report on 11.15.

Paper Reading

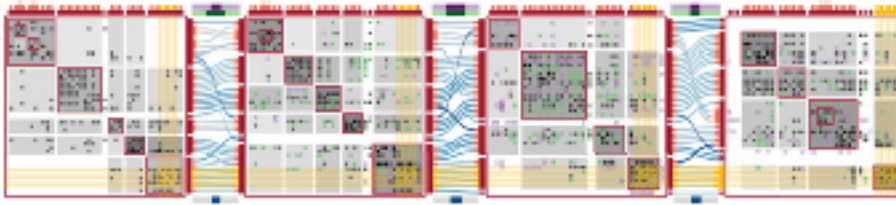
1.CUBu: Universal Real-Time Bundling for Large Graphs



They presented CUBu, a general-purpose framework for creating high-quality bundling from large graphs. It can produce bundling styles similar to a wide variety of existing graph visualization algorithms, such as hierarchical edge bundling, skeleton-based edge bundling, force-directed edge

bundling and so on. And it is 50 to 100 times faster than state-of-the-art bundling methods, thereby opening the door to real-time bundling.

2. Visualizing Dynamic Hierarchies in Graph Sequences



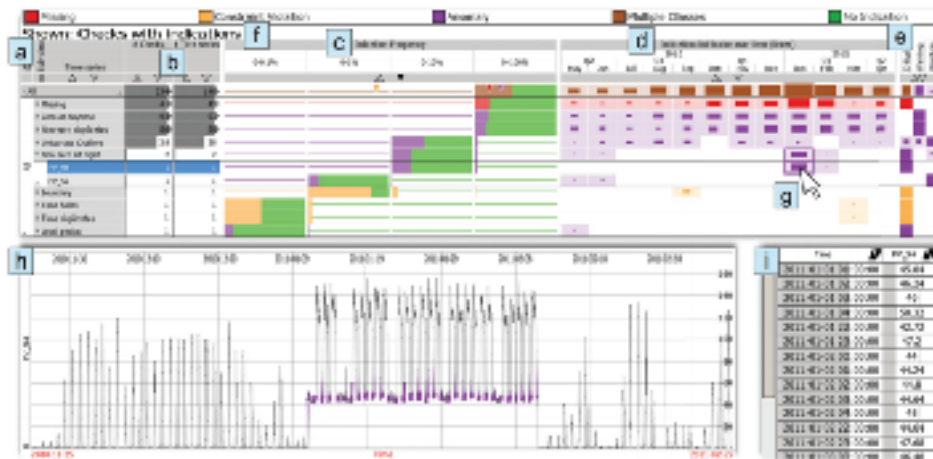
They developed a visualization technique that shows dynamic hierarchical group structures together with their underlying dynamic graph topology. Their technique supports three tasks that arise for hierarchical group structures in dynamic graphs: First, the consistency between the hierarchical group structure and the graph topology of individual graphs can be analyzed. Second, the changes of graph topologies can be tracked on a higher level using the bars and in detail using the encoding of added and removed edges. Last, it is possible to track the hierarchy changes over time.

3.Coping with Volume and Variety in Temporal Event Sequences: Strategies for Sharpening Analytic Focus

[illegible]

This paper described a set of 15 strategies for sharpening analytic focus that analysts can use to reduce the data volume and pattern variety. The figure above shows examples of 20 case studies using multiple analytic focusing strategies gathered from the literature, or based on email interviews with individuals who conducted the analyses and developers who observed analysts using the tools. The case studies reveal the richness and diversity of application domains that can benefit from visual analytic tools for temporal event sequences.

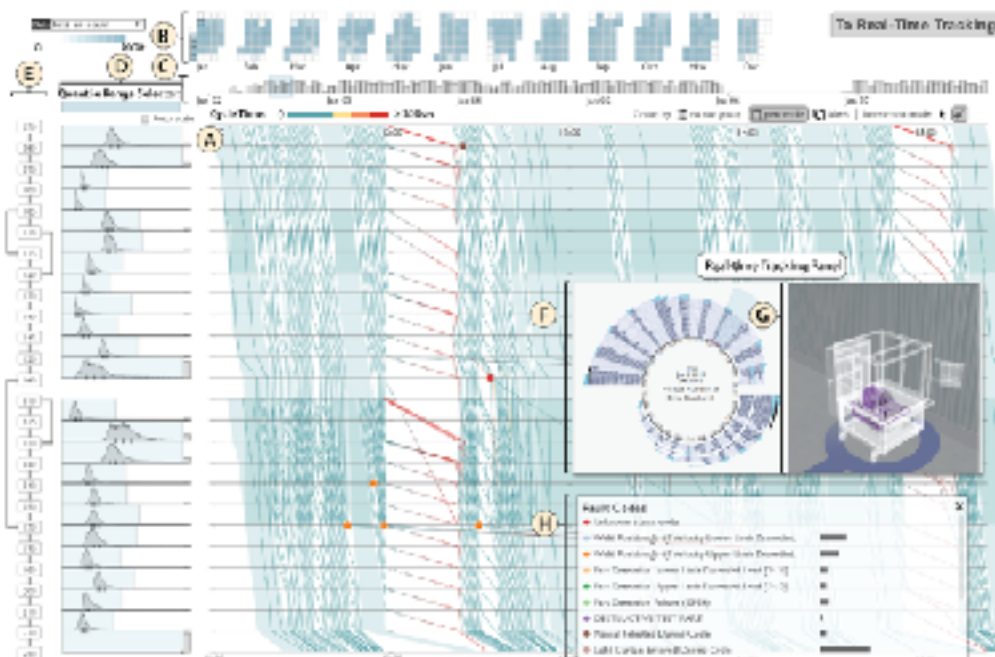
4. Visplause: Visual Data Quality Assessment of Many Time Series Using Plausibility Checks



This paper described Visplause, which supports the routine assessment of DQ based on automated plausibility checks. Visplause consists of multiple linked parts. The DQ overview provides a hierarchical overview of check results (a). DQ overview columns show additional information such as (b) the number of checks and time series, (c) the percentage of affected data, (d) the distribution of check indications over time and (e) the severity of check indications. (f) The current filter shows only checks with at least one check indication. (g) Non-zero at night anomalies at power plant PV 94 in January 2011 have been selected. (h, i) Linked views provide details of the selected data anomalies for validation.

The hierarchical structuring enables analysts to reason about the DQ of many time series on semantically meaningful aggregation levels.

5.ViDX: Visual Diagnostics of Assembly Line Performance in Smart Factories



This paper presents a novel visual analytics solution targeted at the application domain of big data analytics in manufacturing industry. VidX supports tasks of real-time tracking and historical analysis of assembly line performance. Furthermore, they present the application of the Marey's graph and extend it to improve its visual scalability.

To Do

1. Learn about the basic back end coding techniques and tools. (This task may last about 3 weeks or more)
2. Learn about back end coding part of the security project and trying to understand the whole coding from the back end to the front.
3. Keep preparing for the paper report on 11.15.
4. Talk to LIN MING and other related people to have a better understanding of how ontology can intervene in network security data visualization and visual analysis.
5. Learn about basic information about professor Eduard Groeller.